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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/070,911
Filing Date: March 13, 2002
Appellant(s): L'ALLORET ET AL.

Richard L. Treanor
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/20/2007 appealing from the Office action mailed 10/13/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

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(8) Evidence Relied Upon

5,730,966

TORGERSON et al.

3-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 34 is directed to a composition comprising an aqueous phase where the aqueous phase comprises at least one compound with an optical effect and a polymer comprising water soluble units and units having lower critical solution temperature (LCST); the polymer is a block comprising water soluble units alternating with LCST units or the polymer is a graft having water soluble unit and LCST units in the backbone. Dependent claim 40 defines the water soluble units to comprise of (meth)acrylate or vinyl monomers of formula $H_2C=CR-C=O(X)$, with R, X as defined therein and the prior art only has to disclose one of the varied and various monomers listed in claim 40 that is capable of forming the polymer; dependent claim 41 defines the water soluble polymer as one of water soluble polyurethane, xanthan gum, alginates or

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derivatives, cellulose derivatives, galactomannans and polyethyleneimine and the prior art only has to disclose one of the varied and various water soluble units listed in claim 41. The LCST is a polyether or polyvinyl methyl ether or polymeric N-substituted acrylamide derivatives containing units with LCST or copolymeric N-substituted acrylamide derivatives containing units with LCST or polyvinylcaprolactam and vinylcaprolactam (claim 43) and the prior art only has to disclose one of the LCST listed in claim 43. The LCST is further limited by claims 47 and 49 and the prior art only has to disclose one of the LCST listed in claims 47 and one of the LCST listed in claim 49. The method of the method claims 62 and 63 is directed to combining the various components of the claimed composition. A prior art that discloses the claimed composition would meet the method claims because the process of making the composition combines the various components of the composition to make the composition just as the combining steps in these claims. The comprising language of the claims is open and the claims contemplate varied and many monomers and polymers as the LCST and as the water-soluble polymers. No specific combination of LCST and water-soluble polymers is claimed.

Claims 34-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Torgerson et al. (US 5,730,966).

Torgerson discloses compositions comprising water or alcohol soluble thermoplastic elastomeric copolymers and Torgerson's intended uses for the composition are topical application to the skin, application to the hair for styling and as cosmetic (abstract). The polymer comprises repeating units of A and B polymerizable monomers (column 2, lines 61-65), monomer A is as described in column 3, lines 1-16) and monomer B is as described in column 3, lines 17-64). The A and B monomers are related as copolymers in the polymeric composition of

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Torgersen and the molecular weight of the copolymer is in the range of 10,00 to 5,000,000 (column 6, lines 5-17). The structural formula for the A-monomers in column 7 of Torgerson meets the structural formula of the monomer in claim 40 (b) and 47 (b) when, e.g. R^4 is H, X is -OH, -OR, -NH₂, -NHR⁴, and R^5 is H and C₁-C₃ (column 8, lines 16-67) and the specific A-monomers listed in column 8, line 16-67 meet the limitations of the water soluble polymers; specifically, since claims 47 and 49 list the vinyl monomers as an LCST, the Torgerson structure in column 7 when, e.g. R^4 is H, X is -OH, -OR, -NH₂, -NHR⁴, and R^5 is H and C₁-C₃ also meets the limitation of the LCST recited in claims 47 and 49, and the implication of claims 47 and 49 is that in some embodiments, the LCST can be the water soluble unit and the water soluble unit can be the LCST. The N-vinylpyrrolidones, N-vinylcaprolactams (column 10, lines 13-46) and the monomer/polymer units listed in column 9, line 1 to column 13 line 27 are the B-monomers meeting the limitation of LCST of claims 43 and 44. Propylene glycol, ethylene glycol, acrylates, caprolactones and imidazoles are disclosed as monomers (columns 3-11). The recitation of heat induced de-mixing temperature in aqueous solution is a property of the LCST and since a compound and its properties are mutually exclusive, the LCST of the prior art that is the same as that claimed would necessarily have the same property under the proposed recited conditions. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, Torgerson anticipates the claims 42, 45, 46, 48 and 50 that recite the properties of the monomers/polymers. The B monomer/polymer of Torgerson, which is the same as the claimed

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LCST is present at about 15-50% and meets the limitation of claims 51-53. The concentration of the polymer in Examples XVI-XVIII of Torgerson is 2% in the aqueous and thus meets the limitations of claims 54 and 55. The sunscreen agents and skin lightening agents (column 18, lines 13-67) contained in the formulation of Torgerson meets the limitation of compound with optical effect. The method steps of claims 62 and 63 are met by the mixing and combining of the components of the formulation by the method by which the formulation is prepared in Torgerson (see at least Examples XVI-XVIII). Regarding claims 64-65, the broad humidity range of from 40-95 and the room temperature of 25 °C fall within the normal humidity and temperature of any typical day. The formulation of Torgerson can be oil-in-water emulsion and contains oily phase, surfactants, emulsifiers, celluloses and xanthan gums as gelling agents (column 19, line 64; column 22, line 55; column 23, lines 45-54), dimethicone in Example XV is an oil and the formulation can be applied to the skin or hair and thus meets the limitations of claims 67-69 and since the formulation of Torgerson is the same as the claimed formulation, application of the formulation to hair or skin would necessarily have the same effect.

“When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

(10) Response to Argument

Appellants argue that a) Torgerson “does not and cannot anticipate the claimed invention” because Torgerson does not describe with “sufficient specificity” the claimed composition that requires block polymer comprising water soluble blocks alternating with LCST block or graft polymer having water soluble units that bear LCST grafts, where the composition

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“requires water-soluble units and N-vinylcaprolactam homopolymers or copolymers as LCST units in proportion of from 5 to 70%. b) Torgerson does not describe the claimed block polymer and does not provide direction to the graft polymer, that the examiner’s rationale for the rejection stems from picking from a number of monomers in Torgerson and that such a rationale is not tenable according to MPEP 2131.02, and that, Torgerson does not describe “with sufficient specificity” a composition comprising a block polymer having water soluble blocks alternating with LCST blocks or composition that comprises graft polymer where the backbone is formed from water soluble units and bears LCST grafts. c) Torgerson does not provide direction to selecting polymers that control the “rheology of aqueous compositions as a function of temperature, while at the same time maintaining a certain level of transparency of the composition” as described in appellants’ specification at page 4, lines 17-22; that Torgerson selects the polymers based on the properties of the polymers. d) Torgerson’s goal is to prepare and utilize graft polymers and that Torgerson describes the graft polymers as having elastomeric or flexible backbone and rigid, thermoplastic and hydrophilic side chains such that the A monomers in Torgerson are not water soluble and the B monomers water soluble. Appellants thus argue that Torgerson’s disclosure would lead one away from the types of polymers defined by the claims. e) If picking were permitted in Torgerson, the polymers would not be arranged as is arranged in the claims. f) Torgerson does not describe water-soluble backbone with LCST grafts and does not describe heat induced demixing temperature in aqueous solution of said units. g) The Torgerson polymers exhibit two distinct phases in order for each phase to have a distinct glass transition.

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Appellants' arguments filed 8/20/2007 have been fully considered but they are not persuasive.

It is initially noted that appellants based the arguments on claim 34. Claim 34 does not recite specific units having the lower critical solution temperature (LCST) and specifically claim 34 does not recite N-vinylcaprolactam homopolymers or copolymers.

Regarding a) and b), the broad appealed claim 34 leads to polymers having LCST of the types disclosed in Torgerson and specifically the preferred B monomers are named in column 10, lines 21-28 so that regarding b), the specifically preferred lactam polymers would not fit the representation of picking a lactam polymer from a myriad numbers of polymers within a long list of polymer, rather, Torgerson specifically refers to its copolymers as "graft polymers" derived from copolymerization of monomer units and macromonomer units (column 4, lines 59-63) thereby leading the artisan to use any of the preferred A monomers listed in column 8, lines 16-18, with the acrylic acid and methacrylic acid monomers meeting appellant's generic water soluble units in appealed claim 34 and defined according to appealed claim 40. Similarly, the artisan is led to specifically use the preferred B monomers (column 10, lines 21-28) with the lactams meeting the LCST of the appealed claims. One of the graft polymers resulting from this embodiment is one that would have the A monomer such as from acrylic acid or methacrylic acid within the backbone of the graft and bearing the B monomer such as the lactam.

Therefore, Torgerson discloses the claimed invention where the graft polymer has water-soluble monomeric units in the backbone and bearing the LCST units.

Regarding c), claim 34 is directed to a composition and the claim is not directed to selecting or providing guidance on how to select polymers that control the "rheology of aqueous

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compositions as a function of temperature, while at the same time maintaining a certain level of transparency of the composition,” limitations from the specification cannot be imported into the claims and in this case reliance on such a limitation in the arguments appears to be an attempt to change the scope of the claims. Regarding d), Torgerson does not lead away from the types of polymers defined by the claims because as discussed above, Torgerson describes graft polymer having A or water soluble monomer making up the backbone and bearing B or LCST units (column 4, lines 59-63; column 8, lines 16-18; column 10, lines 21-28). Torgerson uses the terms, thermoplastic and elastomeric to define the properties of the copolymer and defines what the terms mean in column 4, lines 19-27 as follows: “thermoplastic” is meant that upon heating, the copolymer softens and upon cooling it rehardens; upon being subject to stress it begins to flow and upon removal of stress it stops flowing. By “elastomeric” is meant that the copolymer has an elastic modulus such that the copolymer exhibits a resistance to deformation and has limited extensibility and retraction. In other words, the copolymer tends to recover its size and shape after deformation.” Thus, the description of a property of the copolymer by Torgerson as being elastomeric and thermoplastic does not in any way teach away from the appealed claims. Regarding e), the preference for Torgerson to use the A monomers such as acrylic acid and methacrylic acid, which meet appellant’s generic water soluble units in appealed claim 34 and defined according to appealed claim 40, and the preferred use of B monomers such as the lactams (column 4, lines 59-63; column 8, lines 16-18; column 10, lines 21-28) in the copolymer or graft polymer is clear teaching and is not representation of picking monomers to construct the polymer. Therefore, Torgerson clearly describes graft polymer having A or water soluble monomers and bearing B or LCST units.

NOTE: Appellants have indicated that review of the provisional rejection of appealed claims 34, 37, 38, 40, 41, 43, 47 and 49 under the judicially created doctrine of obviousness-type double patenting has not been requested, but because the rejections of those claims over the claims of the co-pending application has not been overcome and is not the only rejection left in the application, the rejection is reiterated below.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 34, 37, 38, 40, 41, 43, 47 and 49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 53, 55-59, 62, 63, 71, 72, 83-85, 89 and 98 of copending Application No. 10/197,560. Although the conflicting claims are not identical, they are not patentably distinct from each other because the

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co-pending claim 53 is a cosmetic composition that comprises same polymers as that claimed in the examined application. The 70% in co-pending claim 53 refers to the block A relative to the total weight of the diblock polymer and the 1% to 2% in examined claim 34 refers to the concentration of the polymer on which the de-mixing temperature is determined. The artisan would be able to determine how much of A is present relative to the total weight of the block and the de-mixing temperature is a property of the LCST.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

BF



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